

Title (en)
Phase difference measurement.

Title (de)
Phasendifferenz-Messverfahren.

Title (fr)
Mesure de différence de phase.

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Application
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Abstract (en)
Apparatus for measuring the phase difference between input signals X1 and X2 of equal frequency comprises quadrature sampling circuits, such as Digital Radio Frequency Memories (DRFMs) 1 and 3, having a common local oscillator 13. Analogue to digital converters 29,31,33,35, having a common sampling clock 37, are provided for digitising the in-phase and quadrature samples. The digitised samples are used in look up tables 39 and 41 to provide values of instantaneous phase which, preferably using modular arithmetic, are used to derive in an arithmetic circuit a number of values of phase difference between the signals X1 and X2. The mean of the number of values of phase difference is then determined by the use of an accumulator circuit operating in conjunction with a divider circuit which is clocked at a sub multiple of the sampling clock 37. In an alternative embodiment for higher speed operation, the analogue to digital converters 29,31,33,35 and look up tables 39 and 41 may be substituted by comparators arranged to detect the polarity of the samples and to provide a binary 1 or 0 to indicate the phase of the samples.

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